



Illinois Route 31 from IL 176 to IL 120 - Phase I Study  
Community Advisory Group (CAG) Meeting #4 Index

**Meeting Date:** May 22, 2012

**CAG Meeting #4: Index of Meeting Materials**

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## **AGENDA**

Illinois Route 31 Phase I Study:  
Illinois Route 176 to Illinois Route 120  
McHenry County

McHenry County College Shah Center  
4100 W. Shamrock Lane  
McHenry, Illinois 60050  
Tuesday, May 22, 2012  
1:00 p.m. to 3:00 p.m.



### **Community Advisory Group (CAG) Meeting #4**

| <b>Agenda Item</b>   | <b>Timeline</b> |
|--|-----------------|
| I. Welcome   | 1:00 p.m.       |
| A. Introductions   |                 |
| B. Meeting Overview and Housekeeping Items   |                 |
| C. Summary of CAG Meeting #3   |                 |
| II. Review of Past CAG Meeting Progress  | 1:10 p.m.       |
| A. Project Problem Statement and Purpose & Need  |                 |
| B. Review of Developed Range of Alternatives   |                 |
| C. Review of Alternates Development Evaluation Process   |                 |
| III. Purpose and Need Screening  | 1:25 p.m.       |
| A. Safety  |                 |
| B. Expand Roadway Capacity and Address Traffic Issues  |                 |
| C. Correct Existing Roadway Design Deficiencies  |                 |
| D. Improve Opportunities for Multimodal Connectivity   |                 |
| IV. Introduction to Alternatives to Be Carried Forward   | 1:45 p.m.       |
| V. Workshop: Alternatives Development  | 2:00 p.m.       |
| A. Provide feedback on the Alternatives to Be Carried Forward  |                 |
| B. Identify locations of potential median breaks, U-turn locations, planned access locations and consolidated driveway entrances |                 |
| VI. Recap and Future Meetings  | 2:45 p.m.       |
| (CAG Meeting Adjourned)  |                 |




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## Introductions

- Illinois Department of Transportation
- STV Incorporated & Sub-Consultants
- Community Advisory Group Members
  - » Please refer to list provided in Binder.
  - » Introduce yourself and state the community in which you live and/or which group and/or government agency you represent.

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## Meeting Agenda Overview & Housekeeping Items

- Meeting Agenda Overview
  - » CAG Meeting #3 Overview
  - » Review of Project Problem Statement & Purpose & Need
  - » Review of Developed Range of Alternatives
  - » Presentation of Alternatives Evaluation Findings
  - » Workshop: Alternatives to Be Carried Forward Workshop
- CAG Meeting #4 Housekeeping
  - » Meeting Duration
  - » CAG Folder Handouts

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## Summary of CAG Meeting #3

- Reviewed Project Problem Statement
- Reviewed Project Purpose and Need
- Discuss Regional Development
- Introduce Key Findings from Previous Study and Design Alternatives
- Workshop: Alternatives to Be Carried Forward
  - » Range of Alternatives Based on CAG and PSG Input
  - » Please refer to the CAG Meeting #3 Summary documents in your binder



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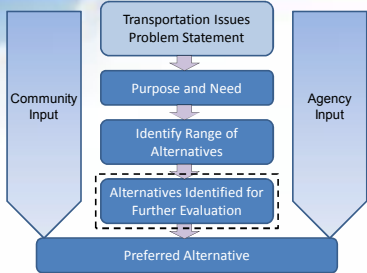
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## Project Process –Alternatives to be Carried Forward



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## Review of Project Purpose & Need

- NEPA Approved P&N at March, 2012 Merger Meeting
- IL Route 31 Project – Purpose
 

*The purpose of the proposed project is to improve safety, address roadway capacity and mobility, correct existing geometric deficiencies and encourage multi-modal transportation along IL Route 31 from the intersection of IL Route 176 to the intersection of IL Route 120, in eastern McHenry County.*
- IL Route 31 Project – Needs
  - Improve Roadway Safety
  - Expand Roadway Capacity and Address Traffic Issues
  - Correct Existing Roadway Design Deficiencies
  - Improve Opportunities for Multimodal Connectivity

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Range of Alternatives – South Section

- South Section (IL Route 176 to Bull Valley Road)\***
  - » 6-lane with 30' & 50' Depressed Median and 10' Outside Shoulders
  - » 6-lane with 18'-22' Raised Barrier Median
  - » 4-lane with 18'-22' Raised Barrier Median
  - » 4-lane with 18'-22' Raised Barrier Median and 10' Outside Shoulders
  - » 5-lane with Bi-directional TWLTL
  - » 4-lane with 30' Raised Barrier Median
  - » 4-lane with 30' Depressed Median and 10' Outside Shoulders
  - » No-Build Alternative

\* All options include a shelf for off-street bicycle and pedestrian accommodations

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Range of Alternatives – North Section

- North Section (Bull Valley Road to IL Route 120)**
  - » 4-lane with 6'-8' Landscaped/Planter Median
  - » 4-lane with 18'-22' Raised Barrier Median
  - » 4-lane with 30' Raised Barrier Median
  - » 5-lane with Bi-directional TWLTL
  - » No-Build Alternative

\* All options were investigated with on-street bike lanes, off-street multiuse paths, elimination of on-street parking (IL 31), maintenance of on-street parking (IL 31)

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Evaluation Criteria

- Meets Identified Needs**
  - » Safety, Traffic and Capacity, Mobility, Pedestrian & Bicyclist Accommodations, Corrects Existing Design Deficiencies
- Environmental, Social, and Cultural Impacts**
  - » Wetlands, Parks, Historic Buildings, Etc.
- Property Impacts / Right-of-way**
  - » Residential, Commercial, Land Use Plans
- Construction Costs**
  - » Construction, Maintenance

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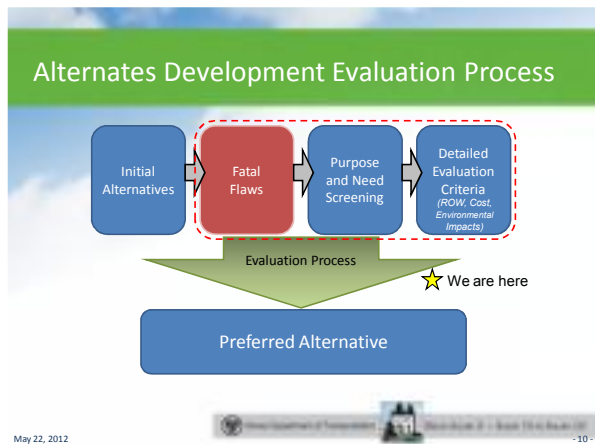
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- ### Purpose and Need Screening
- **Improve Roadway Safety**
    - » Improve motorist and pedestrian safety throughout the corridor
  - **Expand Roadway Capacity and Address Traffic Issues**
    - » Improve Level of Service and Mobility
  - **Correct Existing Roadway Design Deficiencies**
    - » Improve Roadway and Intersection Alignments
  - **Improve Opportunities for Multimodal Connectivity**
    - » Provide Pedestrian and Bicycle Accommodations
    - » Look for ways to enhance and improve public transportation options
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- ### Safety Evaluation
- **Methodology**
    - » Followed 2010 Highway Safety Manual (HSM) for representative section analysis
    - » Relative comparison, not an absolute prediction of crashes
  - **Assumptions**
    - » Existing analysis used 2009 ADT values
    - » Proposed analysis used 2040 projected ADT values
  - **Findings**
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## Safety Evaluation - Findings

| Segment Alternative  | IL Route 31<br>AADT | Predicted<br>Total Crashes / Year | Change from 2009<br>Existing Alternative | Change from 2040<br>No-Build Alternative |
|--|---------------------|-----------------------------------|--|--|
| <b>Typical Segment:</b>  |                     |                                   |  |  |
| 2009 Existing  | 23,500              | 4.4                               | --                                       | --                                       |
| 2040 No-Build  | 32,000              | 6.4                               | 45% Increase                             | --                                       |
| 2040 Build with 4-lanes & a TWLTL  | 44,000              | 12.3                              | 180% Increase                            | 92% Increase                             |
| 2040 Build with 4-lanes & a Median (Raised or Depressed)                       | 44,000              | 4.2                               | 5% Decrease                              | 34% Decrease                             |
| 2040 Build with 4-lanes, a TWLTL, and On-Street Parking                        | 44,000              | 16.6                              | 277% Increase                            | 159% Increase                            |
| 2040 Build with 4-lanes, a Median (Raised or Depressed), and On-Street Parking | 44,000              | 5.7                               | 30% Increase                             | 11% Decrease                             |

- Center median reduces crash frequency significantly versus bi-directional turn lane (TWLTL)
- Bi-directional alternative crash frequency worse than No-Build option for year 2040
- On-street parking increases crash frequency for both bi-directional and center median alternatives, with a more significant increase for the bi-directional alternative

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## Safety Evaluation - Summary

### ■ TWLTL vs. Median

- » TWLTL Alternative anticipated crash rate is **193% higher** than the Median Alternative
- » TWLTL Alternative anticipated crash rate is **92% higher** than the No-Build Alternative

### ■ On-Street Parking impacts

- » On-Street Parking Alternative anticipated crash rate is **35% higher** than the No-On-Street Parking Alternative for both the TWLTL and Median options



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## Expand Roadway Capacity and Address Traffic Issues - Evaluation

### ■ Methodology

- » Used Highway Capacity Software (HCS) and Synchro to analyze Level of Service (LOS)
- » Compared 2040 No-Build to Build Alternatives
- » Range of Alternatives includes full build to minimal build options
- » Intersection alternatives development mainly focused on Lillian/Grove and at IL Route 120
- » Roundabout alternatives investigated at both Lillian/Grove and at IL Route 120

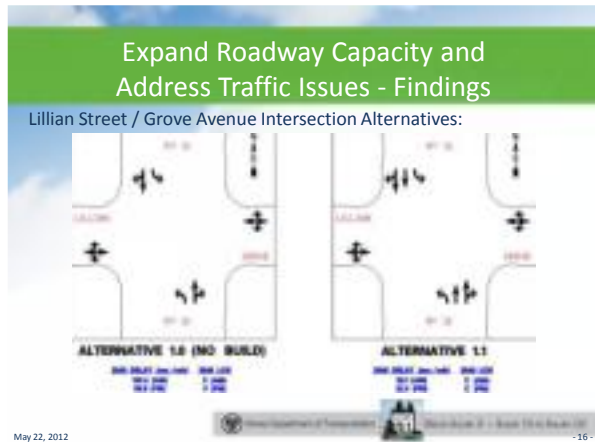
### ■ Assumptions

- » Included pedestrian volumes

### ■ Findings

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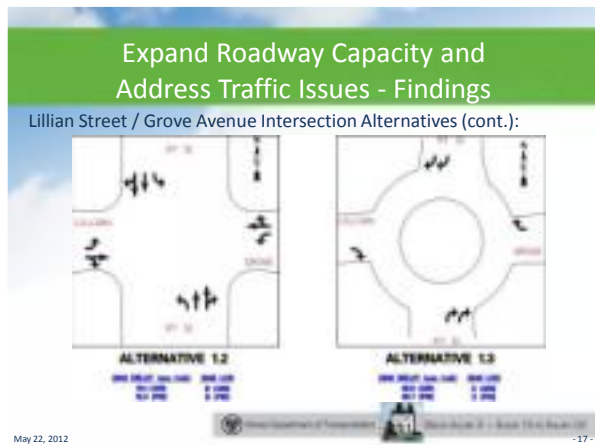
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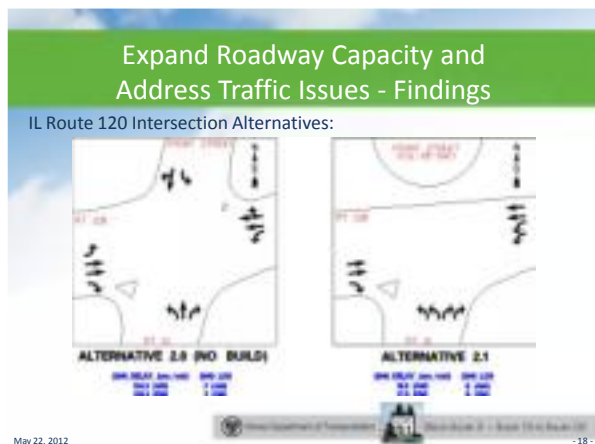
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Expand Roadway Capacity and Address Traffic Issues - Findings

IL Route 120 Intersection Alternatives (cont.):

ALTERNATIVE 2.2 (Pb-Striped)

| Direction  | 2010 ADMT | 2010 ADMT | 2010 ADMT |
|------------|-----------|-----------|-----------|
| Northbound | 1,100     | 1,100     | 1,100     |
| Southbound | 1,100     | 1,100     | 1,100     |

ALTERNATIVE 2.3 (Intermediate Build)

| Direction  | 2010 ADMT | 2010 ADMT | 2010 ADMT |
|------------|-----------|-----------|-----------|
| Northbound | 1,100     | 1,100     | 1,100     |
| Southbound | 1,100     | 1,100     | 1,100     |

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Illinois Department of Transportation

State Road 120 at Route 31

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Expand Roadway Capacity and Address Traffic Issues - Findings

IL Route 120 Intersection Alternatives (cont.):

ALTERNATIVE 2.4 (Pb-Build)

| Direction  | 2010 ADMT | 2010 ADMT | 2010 ADMT |
|------------|-----------|-----------|-----------|
| Northbound | 1,100     | 1,100     | 1,100     |
| Southbound | 1,100     | 1,100     | 1,100     |

ALTERNATIVE 2.5

| Direction  | 2010 ADMT | 2010 ADMT | 2010 ADMT |
|------------|-----------|-----------|-----------|
| Northbound | 1,100     | 1,100     | 1,100     |
| Southbound | 1,100     | 1,100     | 1,100     |

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State Road 120 at Route 31

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Correct Existing Roadway Design Deficiencies - Evaluation

- Methodology
  - » Evaluated existing conditions vs. proposed conditions for each alternative
- Assumptions
  - » Develop a roadway design to meet current IDOT geometric design standards
- Findings

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Illinois Department of Transportation

State Road 120 at Route 31

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## Correct Existing Roadway Design Deficiencies - Evaluation

### Existing Design Deficiencies

| South Section Deficiencies (Vertical Curves)* |       |
|---|-------|
| Location                                      | Type  |
| IL 31 at Drake Drive                          | Crest |
| 470' South of Brighton Lane on IL 31          | Sag   |
| 970' North of Half Mile Trail on IL 31        | Sag   |
| 350' South of Ames Road on IL 31              | Crest |

\*Deficient curves impact sight distance and overall safety

| Drainage Deficiencies**              |      |
|--------------------------------------|------|
| Location                             | Type |
| Culvert North of Gracy Road          |      |
| Standing water at Albany and IL 31   |      |
| Half Mile Trail and IL 31            |      |
| IL 31 from Ames St. to Lillyan/Grove |      |

\*\*Deficient drainage impacts mobility and overall safety

All alternatives will address existing roadway design deficiencies; however, some deficiencies may or may not be corrected due to design constraints

| Deficiencies to Potentially Remain |   |  |
|------------------------------------|---|--|
| Alternative                        | Location  | Reasoning  |
| North Section, Option #1           | Intersection Sight Distance from John St. to IL 120 | Correction requires the obstruction (building) to be removed |
| South Section, Option #1 & #2      | 6 (Six) Driveway Slopes/Grade are steeper than 6%   | Correction would impact structure or adjacent driveway       |

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## Improve Opportunities for Multimodal Connectivity - Evaluation

### Methodology

- » Evaluated existing conditions vs. proposed conditions for each alternative

### Assumptions

- » Alternatives will provide accommodations for future multi-use path and sidewalk
- » Design variances (exceptions) will need to be granted for any alternatives that do not provide for these accommodations throughout the entire study limits

### Findings

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## Improve Opportunities for Multimodal Connectivity - Findings

- Pedestrian and bicycle accommodations will be provided with all alternatives

- Downtown McHenry north of John St.

- » Limited Right-of-Way
- » Bicycle accommodations will create building impacts

\*A majority of the alternatives developed north of John Street allow for the construction of a Multi-use path. However, the minimum build option does not provide for bicycle accommodations north of John Street

| Intersections and Roadway Sections     | Pedestrian/Bike Accommodations |                |            |
|--|--------------------------------|----------------|------------|
|  | Sidewalk                       | Multi-use Path | Crosswalks |
| IL Route 120                           | Yes                            | Yes            | Yes        |
| IL Route 120 to Half Mile Trail        | Yes                            | Yes            | Yes        |
| Half Mile Trail                        | Yes                            | Yes            | Yes        |
| Half Mile Trail to Ames Road           | Yes                            | Yes            | Yes        |
| Ames Road                              | Yes                            | Yes            | No         |
| Ames Road to Edgewood Road             | Yes                            | Yes            | Yes        |
| Edgewood Road                          | Yes                            | Yes            | Yes        |
| Edgewood Road to Gracy Road            | Yes                            | Yes            | No         |
| Gracy Road                             | Yes                            | Yes            | Yes        |
| Gracy Road to Veterans Drive           | Yes                            | Yes            | Yes        |
| Veterans Drive                         | Yes                            | Yes            | Yes        |
| Veterans Drive to Albany/Prime Parkway | Yes                            | Yes            | Yes        |
| Albany/Prime Parkway                   | Yes                            | Yes            | Yes        |
| Albany/Prime Parkway to Shamrock Lane  | Yes                            | Yes            | Yes        |
| Shamrock Lane                          | Yes                            | Yes            | Yes        |
| Shamrock Lane to Bull Valley Road      | Yes                            | Yes            | Yes        |
| Bull Valley Road                       | Yes                            | Yes            | Yes        |
| Bull Valley Road to Lillyan/Grove Road | Yes                            | Yes            | Yes        |
| Lillyan/Grove Road                     | Yes                            | Yes            | Yes        |
| Lillyan/Grove Road to John Street      | Yes                            | Yes            | No         |
| John Street                            | Yes                            | Yes/No*        | No         |
| John Street to IL Route 120            | Yes                            | Yes/No*        | Yes        |
| IL Route 120                           | Yes                            | Yes/No*        | Yes        |


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### Alternatives to Be Carried Forward

- **South Section**
  - » Option #1 = 30' Raised Median throughout
  - » Option #2 = 30' Depressed median and 10' outside shoulder as needed to maintain > 45MPH zones and provide water quality
  - » No-Build Option
- **North Section**
  - » Option #1 = Re-stripe Alternative (10' lanes @ IL 120)
  - » Option #2 = Max Build (30' Median @ IL 120)
  - » Option #3 = Intermediate Build ( 18' Median @ IL 120)
    - Note – All three options utilize a 18' raised barrier median from Bank Dr. to John St.
  - » No Build Option

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### Alternatives to Be Carried Forward

- **South Section – 30' Wide Raised Median – Option #1**



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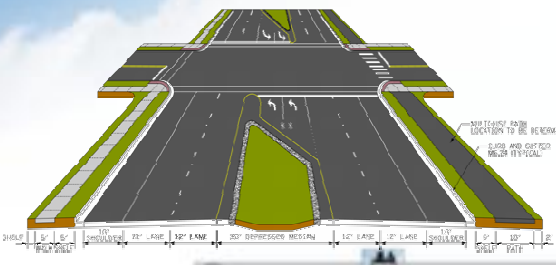
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### Alternatives to Be Carried Forward

- **South Section – 30' Depressed Median – Option #2**



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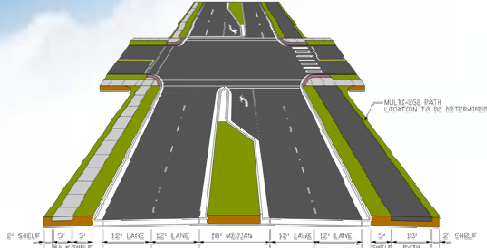
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## Alternatives to Be Carried Forward

- North Section – 18' Raised Median – Options #1,2 & 3



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## Workshop: Alternatives to Be Carried Forward

- **What will be accomplished during this workshop?**
  - » Provide feedback and suggestions on the Alternatives to Be Carried Forward
  - » This input will be used to identify and develop the preferred alternative to address the Purpose and Need
  - » Identify locations of potential median breaks, U-turn locations, planned access locations and consolidated driveway entrances
- **Group Exercise**
  - » Provide feedback on alternatives to be carried forward (45 minutes)
  - » Reconvene by approximately 2:45 p.m.

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## Next Steps and Future Meetings

- **Next Steps**
  - » Ongoing Engineering Project Development activities:
    - » Further refinement of project alternatives
    - » Preparation for upcoming Public Meeting
    - » Preparation for NEPA/404 meeting in September, 2012
  - » Identification of a Preferred Alternative
- **Future Meetings**
  - » Public Meeting #2: July 2012
    - Present and obtain input on Purpose and Need and present the Range of Alternatives

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## **SUMMARY**

Illinois Route 31 Phase I Study:  
Illinois Route 176 to Illinois Route 120  
McHenry County

McHenry County College Shah Center  
4100 W. Shamrock Lane  
McHenry, Illinois 60050  
Thursday, November 3, 2011  
1:00 p.m. to 3:00 p.m.



### **Community Advisory Group (CAG) Meeting #3**

The purpose of the CAG meeting was to present a summary of CAG Meeting #1 and #2 where the project Problem Statement and project Purpose and Need were developed; introduce key findings in previous Route 31 study; introduce design alternatives for sections along the entire project; discuss regional development; and conduct a workshop to receive ideas for design improvements on both micro and macro levels (1"=50' scale plans and regional maps were provided).

Invited participants included stakeholders who signed up for the CAG or who have attended CAG Meeting #1 and #2. A total of 39 volunteers were invited to this CAG meeting.

This meeting was attended by **18** invited CAG members or other interested project stakeholders; and **9** members of the project study group were present to facilitate the meeting and answer any questions (See attached sign-in sheet).

The meeting began with a PowerPoint presentation, conducted by John Clark from STV Incorporated that included topics as noted below:

- **Welcome, Introductions, and Agenda**
  - Mr. Clark introduced the project team including IDOT, STV Incorporated, and Christopher B. Burke Engineering, Ltd. (CBBEL) and briefly explained their role on the project.
  - CAG and project team members introduced themselves – name, whom they represent (group and/or government agency), and/or which community they lived in.
  - All members were given a copy of the meeting agenda and a handout packet including a copy of the presentation and CAG Meeting #2 summary.
  - Mr. Clark gave an overview of the Agenda for CAG Meeting #3 which included an overview of the previous 2 CAG meetings, project problem statement, project Purpose and Need, Engineering Toolbox, and the planned Alternatives Workshop for CAG Meeting #3.
- **Summary of CAG Meeting #1 and #2**
  - The summary of CAG Meeting #2 was presented. Mr. Clark noted that CAG members developed the project problem statement in the first CAG meeting which helped to develop the project Purpose and Need statement for CAG Meeting #2. In addition, the CAG identified the Need statements at the 2<sup>nd</sup> meeting.
  - Design constraints, the Engineer's Toolbox, and the Project Constraints Identification Workshop were reviewed from the previous meeting. Mr. Clark noted that the major project constraints identified included Environmental, Cultural, and Social resources.

- **Problem Statement and Purpose and Need**

- The Project Problem statement was restated in its entirety: “The transportation problems along Illinois Route 31, from Illinois Route 176 to Illinois Route 120, to be solved by this project are: congestion (existing and future), safety for multi-modal users, accessibility for all users, and existing design deficiencies; in addition, minimize overall environmental impacts (e.g. storm water runoff and water quality).”
- An updated Project Purpose and Need statement was presented to the CAG members at CAG Meeting #3. This statement was revised to incorporate some CAG member input provided at CAG Meeting #2
  - The updated Project Purpose was presented as the following: *“The purpose of the proposed action is to address transportation safety, capacity, multi-modal transportation needs, and geometric deficiencies along Illinois Route 31 from the intersection of Illinois Route 176 to the intersection of Illinois Route 120, in eastern McHenry County.”*
  - The updated Project Need Statements were presented as the following: Improve Roadway Safety, Expand Roadway Capacity, Correct Existing Roadway Design Deficiencies, and Improve opportunities for multimodal connectivity. Mr. Clark discussed how the need to accommodate bicycles and pedestrians was revised to the need to improve opportunities for multimodal connectivity, as a result of the previous CAG meeting’s discussions.
    - A discussion from the CAG members began about an additional change to the Need statement that was requested at the previous CAG meeting. During CAG Meeting #2, it was requested by CAG members to add Access Management, or specifically “maintain full access to all properties along IL Route 31”, to the Project and Need statements.
      - The PSG discussed why the Purpose and Need statement was not revised to include Access Management. Access Management is a roadway safety improvement tool that implies the reduction and/or consolidation of access points along a highway to improve safety. It was understood that the term, “Access Management” did not apply to the concerns received from the CAG. One CAG member clarified this request to note that they wanted IDOT to “maintain full access to all properties along IL Route 31” and they wanted this statement to be included in the project Purpose and Need statement. Mr. Clark explained that the inclusion of this statement in the project Purpose and Need would be in direct conflict with the other stated Purpose and Need objectives, mainly safety. He noted that the workshop planned for this CAG meeting would be an excellent opportunity to take a look at specific areas of concern that CAG members may have to identify potential solutions that may satisfy both the project Purpose and Need and the request to maintain access from members of the CAG.
      - Steve Schilke (IDOT) noted that the request to “maintain full access to all properties along IL Route 31”, is not appropriate to include in a Purpose and Need statement or document per FHWA. Since this project receives federal funding, our statement must conform to FHWA guidelines. Illinois Route 31 is an SRA route. IDOT BDE design guidelines for improvements along SRA routes recommend

that the engineer implement access management techniques to improve mobility and safety along the SRA. These techniques include considering limiting local street access, consolidating driveway access points and converting existing driveways to “Right-In and Right-Out” only driveways. These access management techniques are to be included in the design, regardless of the median type (barrier or flush) selected. The PSG will follow guidelines to provide full access for all properties, although this access may not be exactly the same as it is for existing conditions. Each access will be studied and designed on a case to case basis, per IDOT BDE and FHWA guidelines.

- Questions were also raised by CAG members regarding the inclusion of the need to reduce environmental impacts and promote economic growth to the project Purpose and Need statements. The PSG discussed why these needs also cannot be added. Discussion included the following:
  - FHWA does not consider these needs to be appropriate for inclusion in the project Purpose and Need. Since this project receives federal funding, our statement must conform to FHWA regulations.
  - Economic growth was explained to the CAG members as a result of a direct need. For example, a traffic analysis for future traffic demands because of projected economic growth could be a form of demonstrating this need. This example is demonstrated in the current Purpose and Need statement in the form of improved capacity (or Mobility).
  - Environmental impact was not included because regardless of what is included in the project Purpose and Need statement, the environmental impacts are analyzed and minimized. Because this is required by law in the NEPA process, there is no need to incorporate this request into the Purpose and Need Statement.
- The group came to an understanding that the changes resulting in the updated Purpose and Need statement were appropriate; however, in order to capture access management in the form that better satisfied the CAG’s concerns was to change one of the Need statements from “Expand Roadway Capacity” to “Expand Roadway Mobility (Capacity and Accessibility).” The CAG also came to the understanding that their needs could be more specifically captured in the Alternatives Development workshop later in the meeting and throughout the Alternatives Development process.
- **Summary of The Engineering Toolbox, and The Previous Illinois Route 31 Study**
  - The Engineering Toolbox was reviewed. A brief description was provided regarding the design “tools” available to improve safety and mobility along a highway system.
  - Pedestrian / Bicyclist safety improvement tools include pedestrian crosswalks, sidewalks, pedestrian countdown signals, pedestrian pushbuttons, and multi-use paths.
  - Roadway safety improvement tools include raised medians, two-way left turn lanes, driveway improvements, access management, improved sight distance, horizontal curve realignment, and roadway lighting.

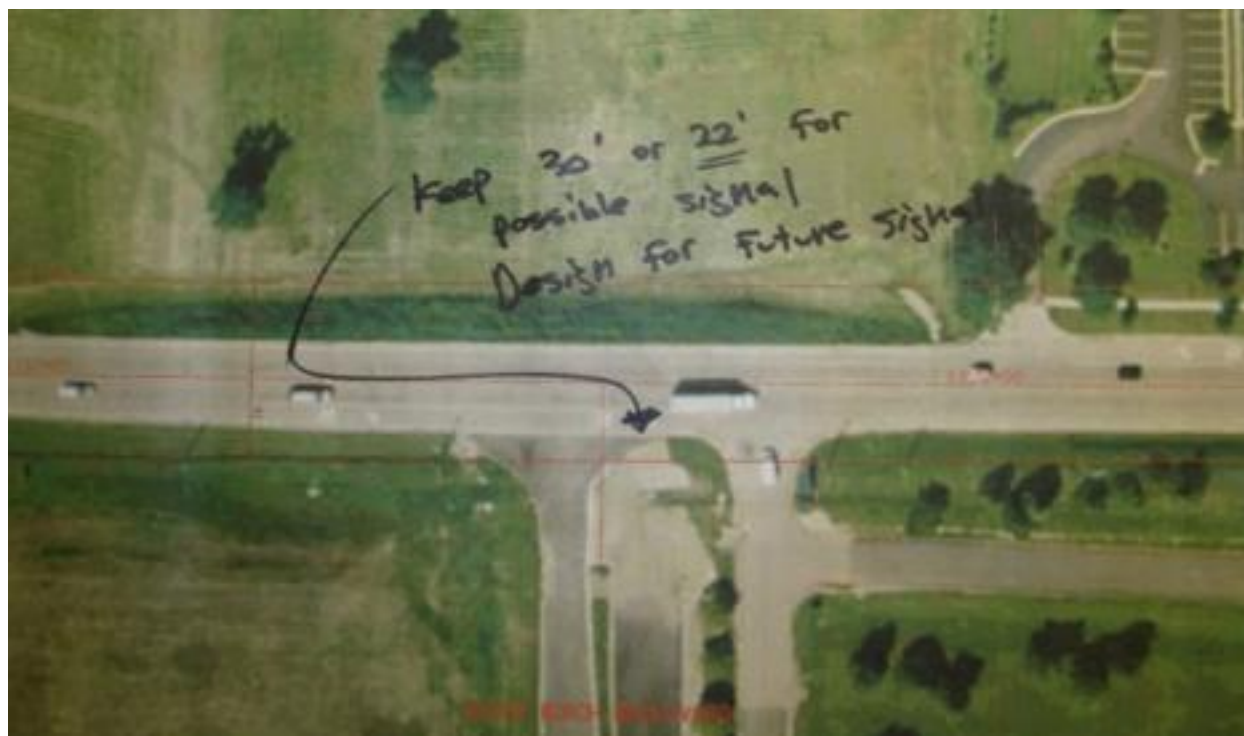
- Capacity improvement tools include add lanes, add turn lanes at intersections, and modify turn lane storage lengths and tapers
  - The previous Illinois Route 31 Study was introduced to the CAG. This study encompassed most of the current study limits from Illinois Route 176 to Bull Valley Road.
  - Major highlights of this study were described to the group which included the preferred alternative was a 4-lane cross section with a 30' raised median. It was noted that several intersections required dual left turn lanes to accommodate 2030 traffic. It was further described that this need would likely increase with 2040 traffic and that dual left turn lanes are best supported with 30' medians.
  - Mr. Clark explained to the CAG that the previous study is an alternative that should be considered while moving forward and that the Illinois Route 31 corridor is an SRA designation.
- **Introduction to Workshop: Alternatives Development and Review of Evaluation Criteria**
    - What will be accomplished during this workshop? Mr. Clark explained that preliminary design alternatives would be developed in this process and that they would be considered through further evaluation and refinement. It was also explained that all alternatives would be considered and recorded. Both on-alignment and off-alignment options could be discussed.
    - Mr. Clark informed the CAG members that the workshop session would be approximately 60 minutes and that we would report back in the same room after the workshop to summarize the alternatives developed. The breakout groups were defined by a regional focus so that alternatives could focus on smaller areas; however, feedback on any section of the project was welcomed in all groups. The three sections or breakout groups were generally described as follows:
      - South Section: Illinois Route 176 to Gracy Road
      - Center/Middle Section: Edgewood Road to Bull Valley Road
      - North Section: Bull Valley Road to Illinois Route 120
    - Group Exercise Introduction. CAG participants were asked to find a room that best concerned the personal interests of the CAG member. For example, if a CAG member was interested in developments and alternatives to be considered in the City of McHenry, they would have more discussions of alternatives in that area in the North Section Group. The Exercises were led by associates from CBBEL and were assisted by PSG members (STV and IDOT).
    - Each group was provided with 1"=50' scale plan sheets with aerial backgrounds that covered the entire project length from Illinois Route 176 to Illinois Route 120. Additionally, each group was provided with a set of 1"=50' scale transparencies that displayed a variety of possible improvements and cross sections. For off-alignment alternatives, each section was provided with a regional roadmap that included the areas of McHenry and Nunda Township as well as an additional aerial map that included a regional view encompassing Illinois Route 31 from Gracy Road to Illinois Route 120.
    - Each group's alternative development session gathered comments, concerns, and suggestions for alternatives based on an open format discussion with facilitation by the PSG as necessary. The full list of developed comments and alternatives during these sessions can be found at the end of this meeting summary
    - Once the workshop sessions were completed, all groups gathered in the original meeting room and presented the alternatives they developed.

- Mr. Clark discussed and reviewed the alternatives development evaluation process and how these alternatives would be evaluated by the evaluation criteria discussed from the previous CAG meeting.
- **Next Steps and Future Meetings**
  - Next Steps: Ongoing Engineering Project Development Activities (Traffic Analysis, Crash Analysis, and Environmental Surveys) and Development of complete Project Purpose and Need document per NEPA requirements. Purpose and Need document to be submitted to IDOT BDE and FHWA for review and approval. NEPA concurrence meeting planned for February 2012.
  - Future Meetings: CAG Meeting #4 tentatively scheduled for Mid January 2012 and Public Meeting #2 in Early February 2012. Exact date of CAG Meeting 4 will be emailed to CAG members and posted on website.

**Workshop Comments and Alternative Development concepts:**

Attached to this summary document are pictures showing the written comments posted on the aerial exhibit roll plot. *(See next page for start of pictures.)* A blank copy of each exhibit is available for download on the project website (including regional maps and transparencies).

### South Section



Picture 1

Comment 1: When considering median design alternatives, it was suggested that the PSG consider both 30' and 22' medians to accommodate future signal designs. There was greater emphasis on the preference for a 22' median.

### South Section



Picture 2

Comment 1: Near the intersection of Half Mile Trial, Improvement #1 was suggested in the southern Leg of the intersection. Improvement #1 involved a 30' raised median with two through lanes in each direction.

Comment 2: A future traffic signal is proposed at the Half Mile Trail intersection.

Comment 3: Arrows were drawn on the roadway to symbolize traffic lanes for the signalized intersection; dual left turn lanes were suggested in the south leg while a single right turn lane was requested in the northern leg.

Comment 4: It was suggested that the Right of Way line on the west side of Illinois Route 31 be held. If additional ROW is required that it is taken from the east side.

Comment 5: The water treatment plant on the east side of Illinois Route 31 was commented as “avoid structure.”

Comment 6: The use of “BMPs” or Best Management Practices, to mitigate water quality or other environmental impacts, in the wetland areas was recommended.

### South Section



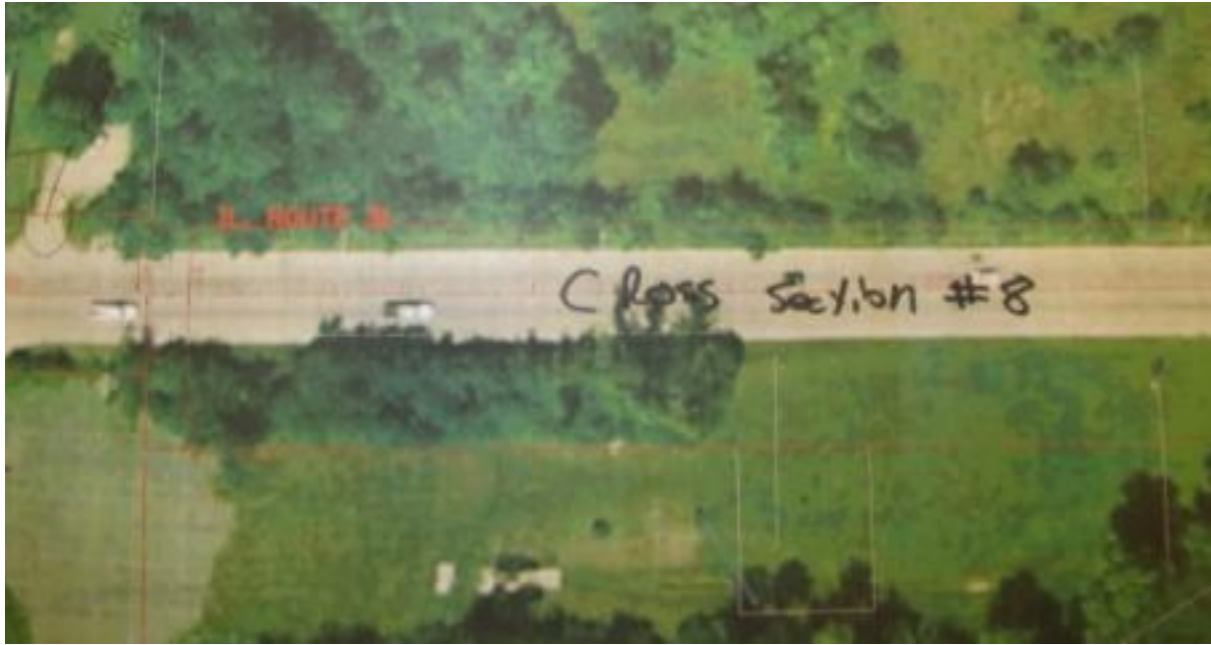
Picture 3

Comment 1: Just north of Half Mile Trail, there was a suggestion to avoid structures for TC Industries.

Comment 2: As mentioned in previous comments, the western Right of Way line should be held and that the eastern ROW line is adjusted for additional space. In addition to this, a similar supplemental comment was made to “widen” in the eastern direction.

Comment 3: There was a suggestion to “Keep Accesses” to TC industries. There are 3 driveways circled.

### South Section



Picture 4

Comment 1: Cross section #8 was suggested for the roadway immediately north of Half Mile Trail past the 3 accesses to TC industries. Cross section #8 is a 22' raised median with two traffic lanes in each direction.

### South Section



Picture 5

Comment 1: Cross section #8 was suggested for the roadway immediately north of Half Mile Trail past the 3 accesses driveways to TC industries. Cross section #8 is a 22' raised median with two traffic lanes in each direction.

Comment 2: Possible traffic signal location at the pumping station south of Ames Road. It was mentioned that this intersection should be improved for full access with a right turn lane for southbound movements and a left turn lane for northbound movements.

Comment 3: There was a note placed on a structure "pumping" and a note placed on the local road as "planning"

### South Section



Picture 6

Comment 1: Between Ames and Edgewood Road, there are many accesses driveways to businesses that could be consolidated through frontage roads or other methods.

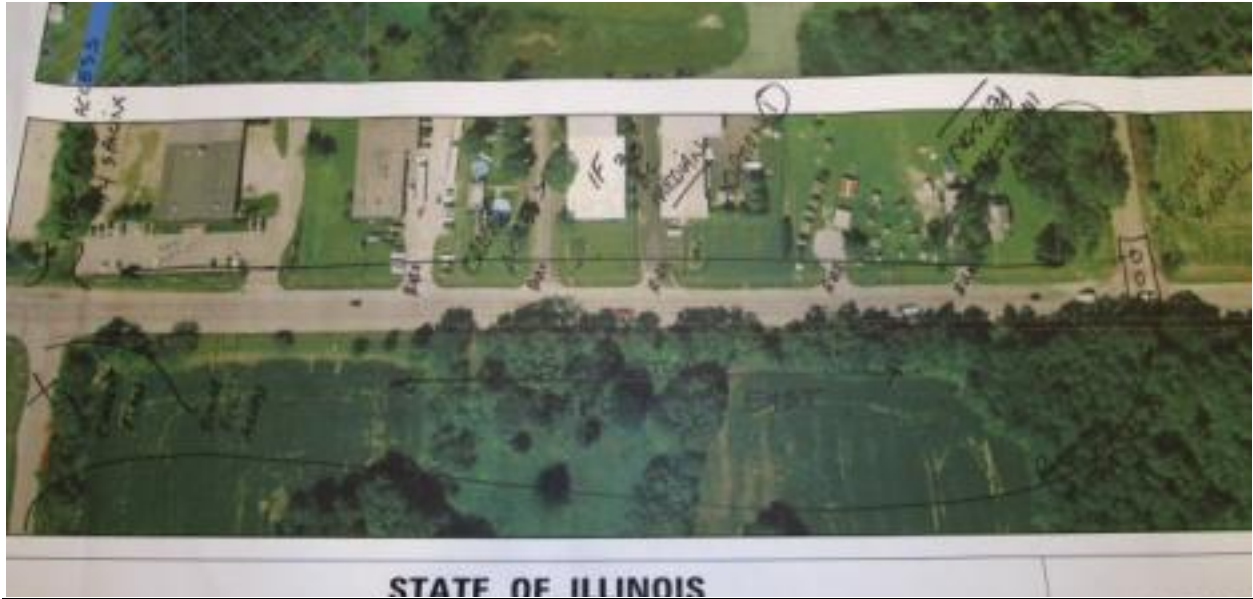
Comment 2: Cross Section #3 should be considered through this area, this cross section involves the use of a two way left turn lane (TWLTL).



Picture 1

Comment 1: Sight Distance is a problem in the highlighted area. This area is south of a private drive, south of Ames Road and north of Half Mile Trail.

### Middle Section



Picture 2

Comment 1: ¼ mile spacing between existing Ames Road and Edgewood Road. Both should have full access with a frontage road connecting the businesses in between and removing direct access to Route 31(west side of Route 31).

Comment 2: If a frontage road is not feasible, than have each access as a Right-in Right-out (RIRO).

Comment 3: Ames Road will be realigned with Edgewood Road in a different planned project. This project would also eliminate the current access Ames Road has with Route 31.

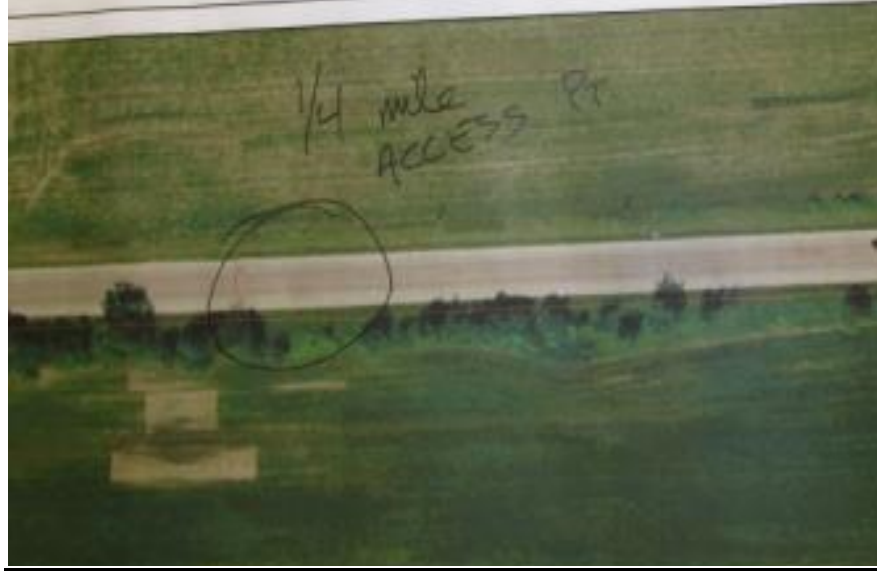
Comment 4: The alignment should be shifted to the east to minimize impacts to the businesses, their parking lots, and their accesses.

Comment 5: Edgewood Road is to be signalized (as part of a separate project).

Comment 6: Right of Way (ROW) acquisition on the south side of Edgewood Road should be minimized if frontage roads are constructed parallel to Route 31 to maintain accesses to businesses. A “very important person” would be impacted.

Comment 7: A new full access driveway (or frontage road access) was suggested for immediately south of the business immediately west of the intersection of Route 31 and Ames Road. This location is approximately ¼ mile south of Ames Road. The access should have a left turn lane along Route 31.

### Middle Section



Picture 3

Comment 1: Illinois Route 31 is an SRA Route. It was highlighted by the discussion leader that full access points could be placed at quarter mile spacing. Full access points are locations where all vehicular movements can be made (Right, Through, and Left movements). This comment appears in various locations but is generally applicable to the entire project

### Middle Section

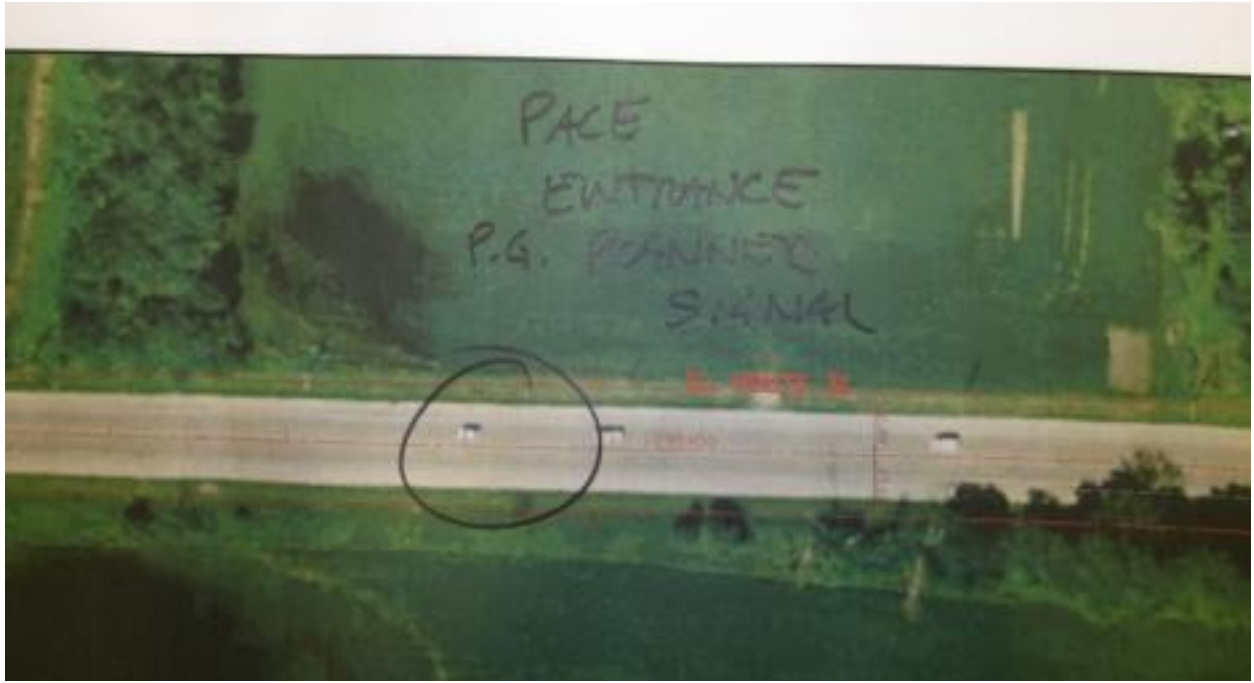


Picture 4

Comment 1: The Prairie Grove Town Center is proposed in this area, west of Route 31. The development includes extending Gracy Road to the west. A bike path overpass is proposed by the Village of Prairie Grove, south of Gracy Road. *(Based on post meeting review of the Village of Prairie Grove Town Center & Transit-Oriented Development Plan, the bike path is actually proposed north of the Gracy Road intersection; not as marked on the exhibit during the meeting.)*

Comment 2: Gracy Road would be signalized by the Village of Prairie Grove as part of their Town Center project.

### Middle Section



Picture 5

Comment 1: A new access road and Pace bus entrance is planned by the Village of Prairie Grove for the Town Center development. The new entrance is planned to include signalized traffic control. This location is approximately ¼ mile north of Gracy Road.

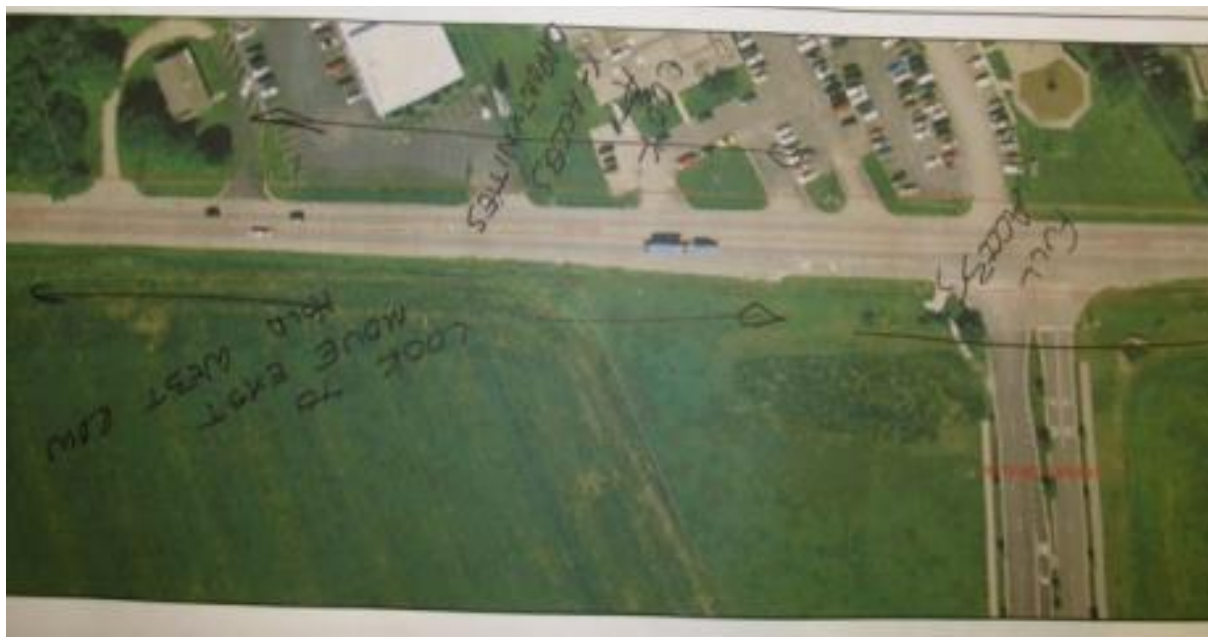
### Middle Section



Picture 6

Comment 1: The McHenry West Bypass project could include a new interchange connection to Route 31 in this area. This area is between Gracy Road and Veterans Parkway. The PSG would investigate this bypass project to determine its status and history. Depending on the status of this project, Route 31 will have alternatives developed to meet the current transportation needs and regional planning developed by the state.

### Middle Section



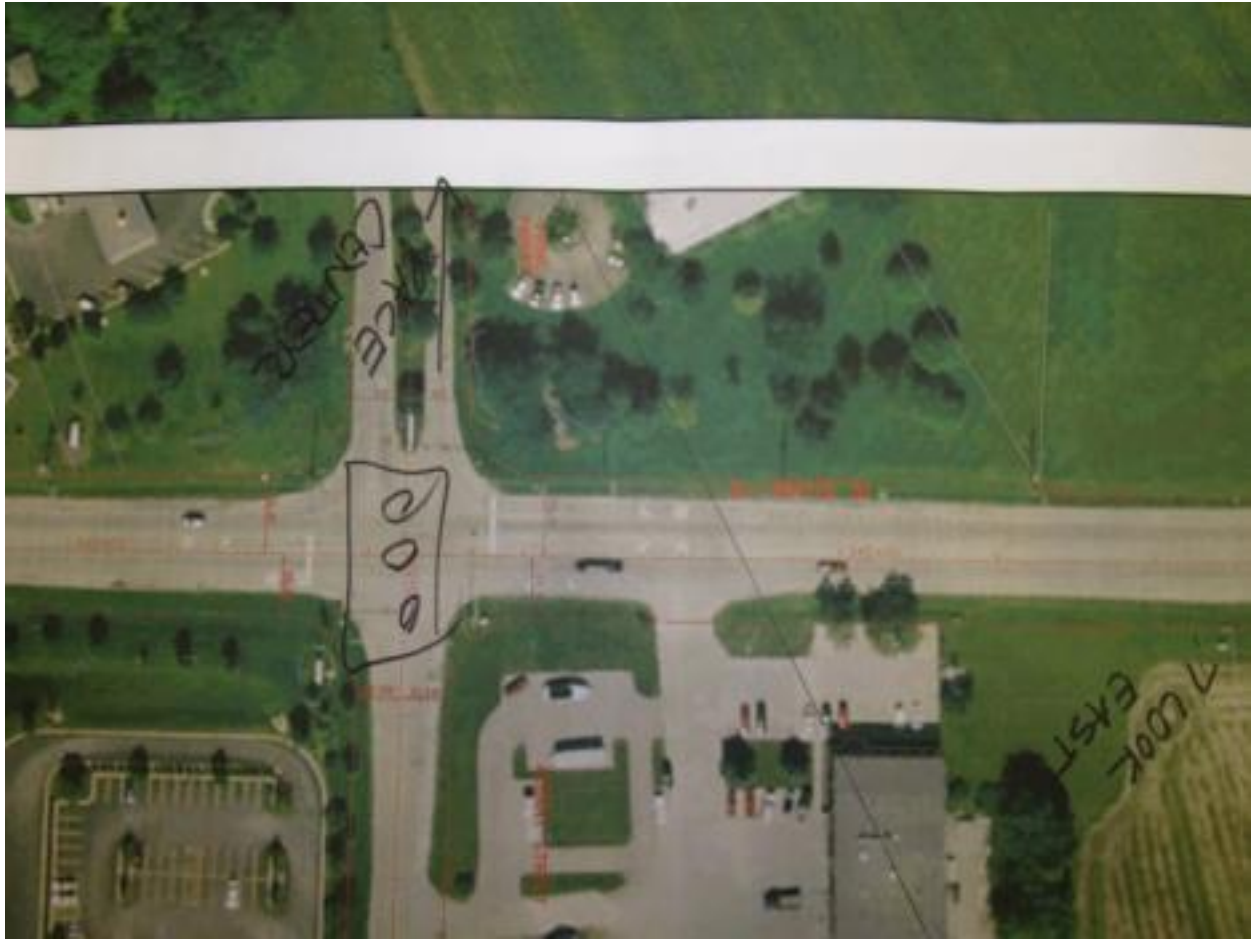
Picture 7

Comment 1: Impacts to businesses along the western Right of Way (ROW) should be minimized in the areas noted. This area is immediately south of Veterans Parkway but could be typical for nearby areas. It was suggested that the PSG should shift the proposed roadway to the east and hold the western ROW line when developing their alternatives.

Comment 2: Investigation of consolidated access opportunities should be investigated. Where it is feasible, adjacent lots could be connected to allow for a reduction of accesses to the same or connected properties.

Comment 3: Full access was requested to be maintained at Veterans parkway

### Middle Section



Picture 8

Comment 1: The intersection of Route 31 and Albany Street /Prime Parkway was identified as an existing traffic signal location and was noted that a “Pace Center” is planned to the west, along Prime Parkway.

Comment 2: As mentioned in a previous comment, the ROW acquisition should focus on the east and avoid impacts to the west of Illinois Route 31

### Middle Section



Picture 9

Comment 1: Dayton Street was identified with the comment: "Industrial, possible <1/4 mile access exception. This intersection is 1000' north of Albany Street and Prime Parkway.

Comment 2: Pace busses make left turns at this intersection. Make sure that alternatives safely accommodate Pace bus movements.

Comment 3: As mentioned in a previous comment, the ROW acquisition should focus on the east and avoid impacts to the west of Illinois Route 31

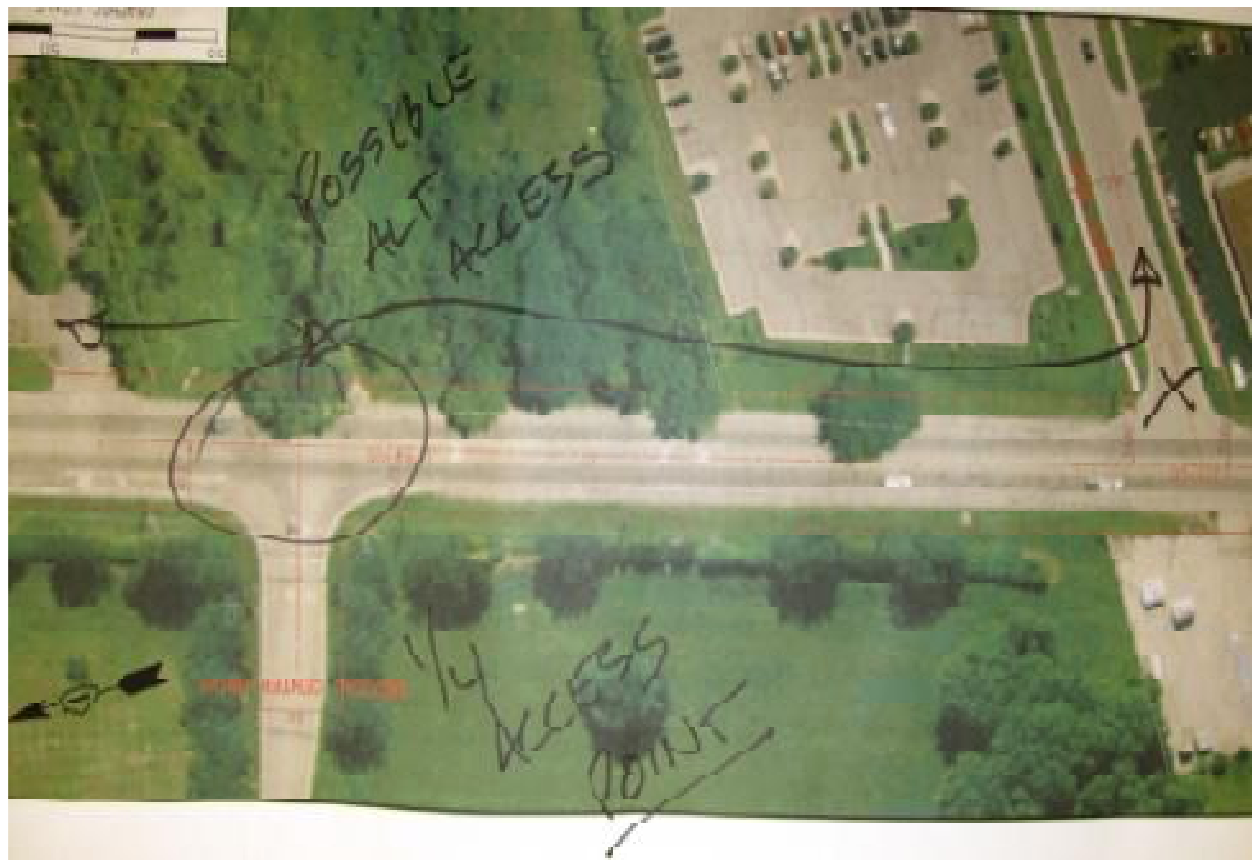
### Middle Section



Picture 10

Comment 1: Shamrock Lane was identified as an existing signal location.

**Middle Section**



Picture 11

Comment 1: Medical Center Drive and Mercy Drive are closely spaced intersections. It was recommended that alternatives be investigated to consolidate these two roadways into one access.

Comment 2: As mentioned in previous comments, Medical Center Drive was identified as an intersection within the  $\frac{1}{4}$  mile accesses per mile SRA guideline. Comment #1 of this picture may need to be implemented to satisfy this design standard.

**North Section**



Picture 1

Comment 1: Cross section improvement #3 for a bidirectional left turn lane is “scary”. It was suggested to not use this section.

Comment 2: Eliminate cross section Improvement #2; this cross section involves having 3 traffic lanes in each direction plus a 30’ raised median. It was agreed as a group that this section was too large for the north section.

Comment 3: It was suggested that improvement #8 (2 lanes each direction with 22’ raised median) was a better cross section for the downtown area, especially away from intersections.

#### North Section



Picture 2

Comment 1: Suggestion to include 5' bike lanes on both sides of the roadway in the northern sections where ROW is limited

Comment 2: "trail dangerous down town" was marked on the exhibit to support comment 1

The following conflicting comment was expressed by the CAG members but was not noted directly on the exhibit:

Comment 3: Prefer off road path since it is safer for use by recreational users, including small children.

#### North Section



Picture 3

Comment 1: Suggestion to use 11' lanes in the downtown area to minimize impacts

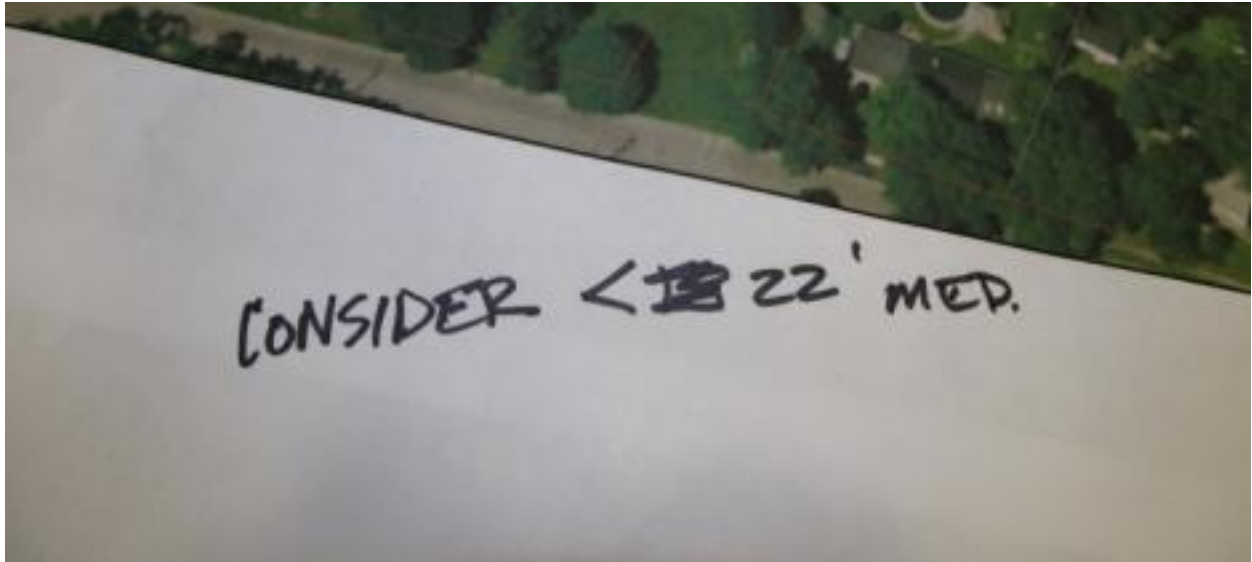
Comment 2: Suggestion to eliminate parking north of Main Street.

The following comments was expressed by the CAG members but were not noted directly on the exhibit:

Comment 3: There is already quite a bit of parking along many of the side streets. Consider elimination of all parking along IL Route 31. If necessary, additional parking can be provided via new parking lots.

Comment 4: Consider converting closely spaced side streets (i.e. Waukegan Road) to Cul-de-sacs. If cul-de-sac is not possible, make some of the side streets right-in and right-out only.

### North Section



Picture 4

Comment 1: In the segments north of Bull Valley Road, consider minimizing the median size and using less than 22' medians.

**North Section**



Picture 5

Comment 1: A regional concept was presented which would involve converting part of existing Illinois Route 31 into a one-way street or a couplet. IL Route 31 could be converted to one-way southbound and Green Street into a one-way roadway for northbound traffic. The drawn concept involved the one-way streets extending from Illinois Route 120 to Bull Valley/Charles Miller Road, with the major connection between IL Route 31 and Green Street via these roadways, but other shorter couplet sections and connection options are possible.

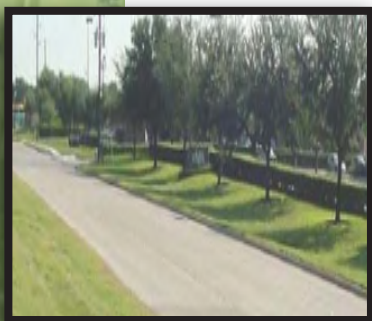
CAG Meeting #3 completed at approximately 3:30 p.m.

The next steps for the study will include the continuation of ongoing engineering project development activities (e.g. Traffic Analysis / Projections, Crash Analysis, and Environmental Surveys), the development of the project Purpose and Need document per NEPA requirements, and the development of a range of initial design alternatives based on discussions from the workshop session. The next CAG meeting is tentatively scheduled for mid-January. When an exact date is established, CAG members will be contacted via email and the project website will also be updated. At this meeting the following activities are tentatively planned: present complete draft Purpose and Need document and discuss range of initial design alternatives for presentation at the next Public Meeting.

# SAFE ACCESS IS GOOD FOR BUSINESS



U.S. Department of Transportation  
Federal Highway Administration



You may be reading this primer because your state transportation agency or local government has told you about plans that will affect access to your business. They may be planning to install a raised median on your roadway, to close a median opening, or to reconfigure your driveway. Perhaps your request for a driveway is under review or the regulating agency has imposed conditions on its approval. Or, maybe the state or local agency is planning a new access policy and you have questions or concerns about the economic effects of these changes.

**Whatever the reason, it is important for you to understand the basis for these changes and how they might affect your business.**

This primer will address questions you may have about access management and its effect on business activity and the local economy. It focuses on economic concerns that may arise in response to proposed access changes or policies, including potential impacts on business activity, freight and deliveries, parking for customers, and property or resale value of affected property.

## Why is my access being changed or reviewed?

The access changes being proposed for your business or road are part of a growing effort by government agencies to improve how major transportation corridors are managed. These efforts, known as access management, involve the careful planning of the location and spacing of driveways, street connections, median openings and traffic signals. Access management can also involve using medians to channel left-turns to safe locations, and providing dedicated turn lanes at intersections and access points to remove turning vehicles from through lanes. The combined purpose of these strategies is to reduce crashes and traffic delay.

**To understand access management, it is important to know that roads have different primary functions; either to provide access or move traffic.**

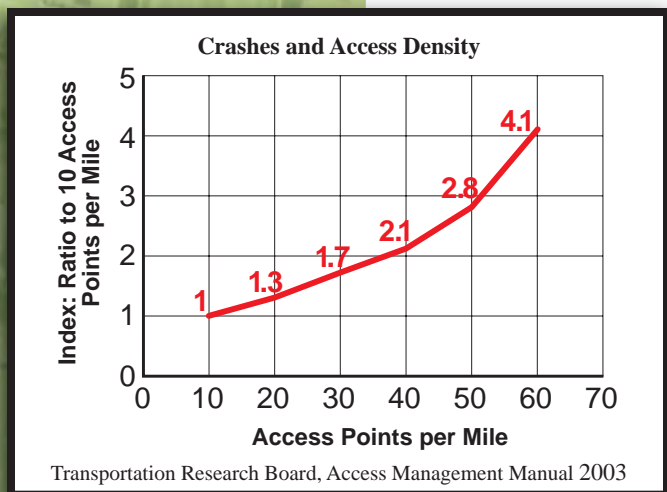
- The main function of **minor roads**, like neighborhood collectors and local streets, is to provide access. Minor roads must operate at slower speeds so people can enter and exit homes and businesses safely and conveniently.
- The main function of **major roads**, like interstate freeways and regional highways, is to move traffic over long distances at higher speeds. Access to these roads must be carefully managed so requests for new access to development do not contribute to unsafe or congested conditions.

## How exactly does this improve the situation on my road?

One reason managing access on major roads is so important is that driver safety is reduced when access is not properly located and designed. Imagine, for example, a driveway on an interstate freeway – it would certainly cause serious safety concerns. These same safety problems occur with improperly designed access to major arterial roads.

*"In the four years I have lived here we at times have seen a lot of rear end collisions here, and we haven't seen one now for a long time."*

— E. Stanley Tripp of Tripp's Auto Sales in Spencer, Iowa, commenting on a median project in his area.



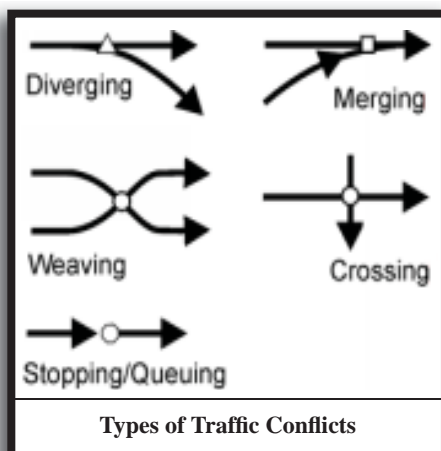
**Managing access on your road can result in better traffic flow, fewer crashes, and a better shopping experience for you and your neighboring businesses.**

Consider the effects of adding more access points to a highway. A national study in the late 1990s looked at nearly 40,000 crashes and data from previous studies to determine the crash rate associated with adding access points to major roads. It found that an increase from 10 to 20 access points per mile on major arterial roads increases the crash rate by about 30% (1). The crash rate continues to rise as more access is permitted. This is why **studies consistently show that well-managed arterials are often 40 to 50 percent safer than poorly managed routes (2).**



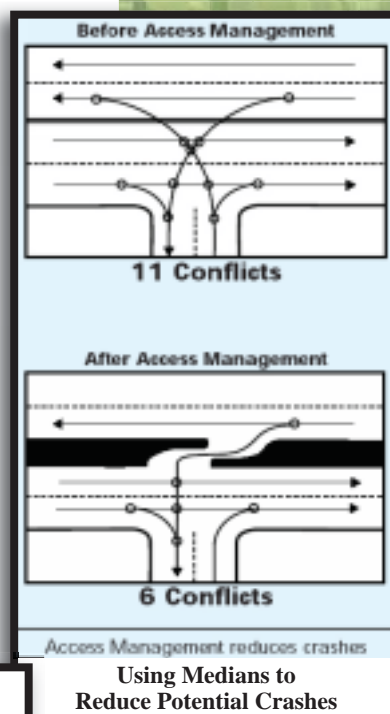
Example of Crash Involving Left-Turn Movement from Driveway

## How does access management improve safety?



Each access point creates potential conflicts between through traffic and traffic using that access. Each conflict is a potential crash. **Access management improves safety by separating access points so that turning and crossing movements occur at fewer locations.** This allows drivers passing through an area to predict where other drivers will turn and cross, and also provides space to add turn lanes.

The figure to the right shows how basic changes in access design, such as incorporating a median or changing a full median opening to a directional opening, can reduce traffic conflicts and the potential for crashes.



**If crashes and congestion become frequent on your roadway, people will seek out other routes. Bear in mind that a single crash can tie up traffic and potential customers for hours.**

## What about congestion and the effect it has on my market area?

Access management not only improves roadway safety, it also helps reduce the growing problem of traffic congestion. Frequent access and closely spaced signals increase congestion on major roads. **As congestion increases, so does delay, which is bad for the economy and frustrating to your customers.** Well-managed arterials can operate at speeds well above poorly managed roadways – up to 15 to 20 miles per hour faster. **This means more traffic past your door and better exposure for your business. It also means a more convenient shopping experience for your customers.**



## How will a change in access affect the success of my business?

To address this question, it's important to first determine the type of business that you own – drive-by or destination.

- **“Destination businesses”** are businesses that customers plan to visit in advance of the trip. Examples include electronics stores, doctor or dentist offices (in fact most offices), major retailers, insurance agencies, sit down restaurants, etc.
- **“Drive-by businesses”** are those that customers frequent more on impulse or while driving by, such as convenience stores, gas stations, or fast food restaurants.

**If you own a drive-by business, your clients will expect to get in and out easily from the highway. For you, the critical issues are *visibility, signage, and convenient access*.** If your site is relatively small, a driveway connecting to the highway may not be your best option. A driveway on a highway service road or a private circulation lane serving several properties can increase the convenience of your access and the volume of customers you can accommodate. Convenient access can be provided by periodic connections between the service road and the highway, or through the shared private access points. Short driveways or open frontages not only cause safety hazards for pedestrians and traffic, but have less capacity than local roads or long driveways.

**Access management has no impact on the demand for goods and services.**

*“Our business has increased about 20% in customer count.”*

— C. Randy Rosenburger  
of City Looks in Ankeny  
Iowa.

**If you are the owner of a destination business, your customers are planning their trips in advance. A driveway on a congested highway or a highway that is perceived as unsafe may actually intimidate customers from making the trip.** Most small destination businesses or specialty stores benefit more from access to a lower speed minor road, such as a neighborhood collector road. The greater exposure that a major road provides is an advantage for larger destination businesses, but it's a good idea to have access from more than one roadway. Allowing customers to enter and exit from different directions will increase safety and convenience.

## How important is access to the success of my business?

**Location and access are factors, but not the most important factors that determine whether businesses succeed or fail.** The main reason that businesses fail is lack of management expertise (3). The main reasons that businesses succeed include (4):

- the experience of management,
- how well customers are served,
- the quality of the product or service provided,
- adequate financing and investment,
- well-trained employees,
- the level and nature of competition, and
- keeping costs competitive.

Given that access is not the primary reason that businesses survive or fail, it follows that a change in access will not be the primary cause of whether a business will survive or fail. In fact, access is one of the lesser factors that customers will consider when weighed against price, service, product, and store amenities.

This is not to say that good access is not important to your business. **Whether your business is large or small, it is important that you can handle customer traffic demand.** If you operate or develop major retail centers, factories, or campuses, proper location and design of access is essential to customers and employees. For shopping centers, the Urban Land Institute's Shopping Center Development Handbook states "poorly designed entrances and exits not only present a traffic hazard, but also cause congestion that can create a negative image of the center (5)." This is also true for small businesses, especially those on the intersection of busy roads. If your business is difficult or unsafe to enter or exit, then customers may be dissuaded from visiting.

**Just think about the roads in your community where access has been carefully planned and compare them to those having lots of driveways, open frontages, and no median. Which roads do you prefer to travel on and which corridors have the most vibrant businesses?**

**Small corner properties are more difficult to access.**



**This queue is blocking street traffic and additional customers**

**Is this a sign of a store doing great business, or one that is telling customers to try the next guy down the street?**

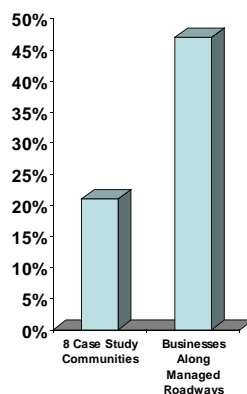
## What has been the impact to businesses where this type of thing has been done?

Studies of the business impacts of access management projects in Florida, Iowa, Minnesota, Kansas and Texas have consistently found that most businesses continue to do well when the project is completed. These results are particularly true for destination businesses. However, most drive-by oriented businesses are not unduly affected either. Drive-by businesses have been adversely affected by reconstruction projects that reduce their visibility from the major road or cause them to have highly circuitous or inconvenient access. However, these are not typical impacts of access management projects and where they do occur, it is not uncommon for transportation agencies to compensate business owners for losses.

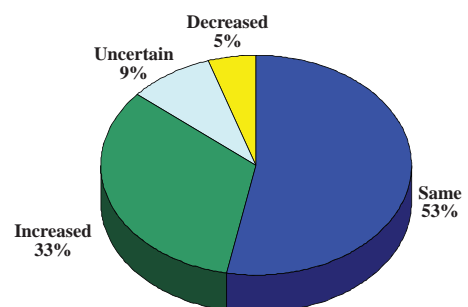
**Business activity:** Access management projects alone do not appear to increase or decrease business failure rates (6). This makes sense considering that many factors other than highway access can affect business success. **“Before and after” studies of businesses in Florida, Iowa, Minnesota, and Texas along highways where access has been managed found that the vast majority of businesses do as well or better after the access management projects are completed.** The turnover rate (the proportion of businesses that close or move out each year) of businesses in Iowa and Minnesota was studied along newly access-managed corridors and was similar to or lower than that of the surrounding area. For example:

Businesses affected by access management projects in Iowa tended to do at least as well in terms of growth in retail sales, but usually better than those in surrounding communities, after the projects were completed. Most of these Iowa business proprietors said that sales were similar or greater following the completion of the projects. Only five percent reported a sales decrease (6).

Impact of Access Management on Retail Sales Growth



Business Proprietors' Reported Sales Comparisons



**Business owners report that the actual impacts to their businesses were much less than they anticipated. Most adverse impacts were due to construction and not to access changes.**

*"If anything, our business has increased, which very much surprised me."*

— D. Stanley Tripp of Tripp's Auto Sales in Spencer, Iowa

**Property values:** Most property owners surveyed following an access management project do not report any adverse effect of the project on property values. Often, such projects can have a positive effect by cleaning up the patchwork of driveways and curb cuts. For example:

A study of property values on **Texas** corridors with access management projects found that land values stayed the same or increased, with very few exceptions (7).

More than 70% of the businesses impacted by a project in **Florida** involving several median opening closures reported no change in property value, while 13% reported some increase in value (8).

A 2005 study of commercial property values along a major access management project in **Minnesota** found that property values depend more on the strength of the local economy and the general location of the property in the metropolitan area; changes in access seemed to have little or no effect on the value of parcels (9).

A study of **Kansas** properties impacted by access changes found that the majority were suitable for the same types of commercial uses after the access management project was completed. This was true even for businesses that had direct access before the project and access only via frontage roads after project completion (10).

**Customers and deliveries:** The majority of customers and truck drivers surveyed in before-and-after studies have reacted positively to access management projects as improving both safety and traffic flow. Business customers surveyed about access management projects in Iowa, Texas and Florida overwhelmingly supported the projects because their drive became quicker, easier and safer (6).

## What are some common types of access management projects and what are the impacts?

There are many access management techniques, each with a specific purpose and different type of impact. One common type of access change is the building of a **median** on a road or closing existing median openings. Another common type of project is providing a **frontage road** or a rear service road along a highway for access to businesses. Below is an overview of these strategies, the types of issues or impacts associated with these projects, and how you can work with the agency to adjust to these changes.

## MEDIANS and MEDIAN OPENINGS

**A median is a grass or raised divider in the center of a road that separates opposing traffic and discourages or prevents vehicles from crossing the divider.**

Openings in the median provide for different turning or crossing maneuvers, depending on how they are designed.

- A **directional median opening** only allows certain movements, usually a left-turn in or U-turn.
- A **full median opening** allows all turning and crossing movements and is often signalized.

Where too many full median openings exist, agencies may reconstruct the median and close the excess median openings.



Turn lanes at median openings provide a safe haven for turning vehicles.

## Why use a median and not a two-way left turn lane?



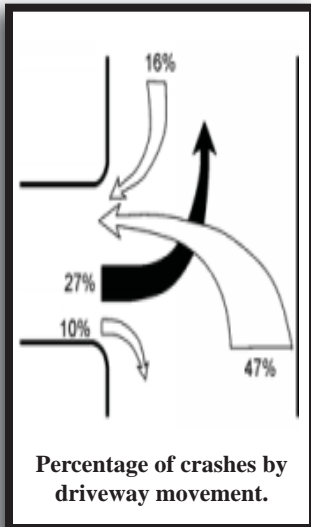
Conflicts and potential crashes associated with continuous two-way left turn lanes

Medians can have a profound effect on driver safety compared to two-way left-turn lanes. Adding a median to a road that previously had a continuous two-way left turn lane can reduce the crash rate about 37% and the injury rate about 48% (11). **For example, when a continuous two-way left turn lane was replaced with a median on Atlanta's Memorial Drive, the crash rate was cut in half (12).**

One reason a two-way left turn lane is less safe than a median is that a driver who is turning left must be able to ensure that the traffic is clear from two directions in multiple lanes. When this is not quite possible, drivers will sometimes use a two-way left-turn lane in the middle of the road while attempting to merge into traffic. Such maneuvers can lead to serious crashes and become more frequent as traffic volumes increase.

## Won't I lose customers if they can't turn left into my business anymore?

The number of your customers making left turns into your business is likely already very low during peak travel periods or if you are on a congested roadway. This is because left turns into any business become increasingly difficult as traffic volumes in the opposing lanes increase.



Perhaps today your customers wait with apprehension to turn left as cars queue behind them, or must shoot across a busy road to complete a left turn out. A turn lane at a median opening or signalized intersection will allow them to wait safely to complete a U-turn when traffic clears, and that is truly a safer option on a busy road. **In fact, the left-turn into and out of a driveway is less safe than a U-turn and comprises the majority of driveway crashes.** Studies have shown that making a U-turn at a median opening to get to the opposite side of a busy highway is about 25% safer than a direct left turn from a side street or other access point (13).

**Surveys show that a majority of drivers have no problem making U-turns at median openings to get to businesses on the opposite side of the road.** Where direct left-turns are prohibited, studies show that motorists will change their driving or shopping patterns to continue patronizing specific establishments. In fact, most drivers are reporting that access management improvements made the roads safer and that they approve of the changes, despite minor inconveniences associated with U-turns.

Some owners of drive-by businesses have reported a loss of customers following a median project or other change that has eliminated the left-turn-in opportunity (and less often left-turn-out), although the majority do not. For example, a before-and-after study of a median reconstruction project in Florida involving numerous median-opening closures found that **the majority of surveyed merchants, 68% of the 96 respondents, reported little or no economic impact to their businesses, although 27% reported some type of loss (14).** Generally, businesses that feel they were adversely impacted also have competition nearby or may have experienced reduced visibility of signage.

*"Because of the design of the roads, the timing of the traffic signals, and the way the traffic is broken up, it has become very convenient for people to pull into a safe haven, or storage lane within the raised median, take their time and make a safe and convenient u-turn to access properties that were concerned about that problem."*

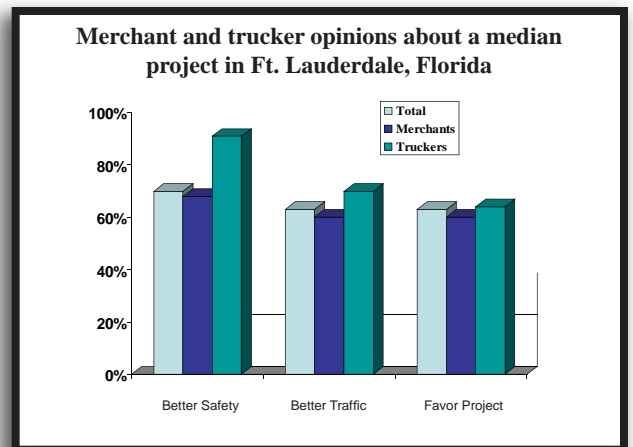
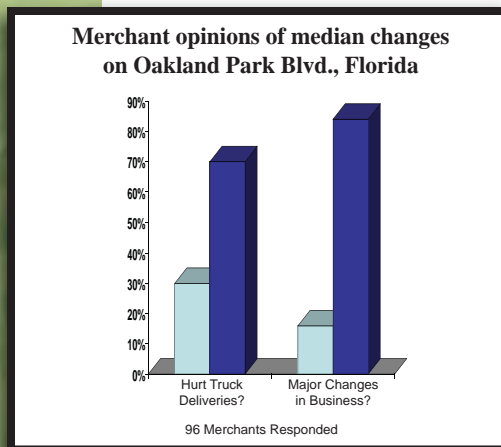
— Kurt Easton, Executive Director of Merritt Island Redevelopment Agency, Florida

## Why not just signalize all median openings and high volume driveways?

The decision on whether or not to signalize a median opening or access point depends on many factors, including the volume of traffic using the access, the proximity of other traffic signals, and the potential impact on public safety and traffic congestion. Most signal warrants are related to traffic volumes, but some consider school crossings, crash history, pedestrian crossings, “factory” peaks, and other situations. Unwarranted signals cause undue delays as motorists wait at a red light while little or no cross traffic exists. Worse, unwarranted signals may eventually be disobeyed or ignored by frustrated motorists who are only one reckless incident away from causing an accident or emerging as a casualty themselves. For these reasons, median openings and driveways should not be signalized where they do not meet the requirements of a traffic signal study.

## What about impacts on truck deliveries?

The limited number of before-and-after studies have found that truck deliveries may be inconvenienced, at worst, but may in fact benefit from improved opportunities resulting from a change in access. And while the actual studies may be few, the anecdotal comments are many and favorable.



## What are the other issues with medians and median opening closures?

- Alternative access through side streets, service roads, or internal connections with neighboring developments helps increase accessibility on busy or median separated roads – especially if the result allows several properties access to a signal.
- Minor roadway improvements, such as additional pavement on the shoulder, may be needed to accommodate U-turning traffic.
- Some trucks and large vehicles may need to take alternate routes as U-turns can be difficult to negotiate.
- Medians can be landscaped to enhance the image of an area and help attract investment and customers.

# FRONTAGE or SERVICE ROADS

***A frontage road is a type of service road that parallels a major road or freeway and is located between the road and building sites abutting the road. Service roads can also run behind businesses.***

The purpose of these roads is to provide lower-speed access to commercial sites along a major roadway and to separate business traffic from higher-speed through traffic. Connections of frontage or service roads to side streets or onto the highway must be well away from signalized intersections, so entering and exiting traffic doesn't conflict with traffic queuing at signals.



Rear service roads providing access to highway commercial properties.



A frontage road.

## How will I get access while I'm waiting for a frontage or service road to be finished?

Some sites may need to be given temporary access to the major roadway until the service road system is complete. This is typically needed when a service road is being constructed in segments through the development process, rather than built by a transportation agency as part of a road construction project. Most agencies will require you to remove your temporary driveway and build a driveway to the frontage or service road at a later time, so it's important to design your site access and circulation to accommodate that change.

## How will people know how to get to my business from the highway?

Frontage roads maintain good visibility for businesses along a major road and typically it is apparent how to enter and exit the road to get to a business. Points of entry can be signed to identify businesses that can be accessed from that entrance, if it is not already apparent. **It's a good idea to provide signs where a service road or frontage road connects at a side street, so customers know they can obtain access** to businesses that may not be visible from the side street.

## What are the other issues with frontage or service roads?

- **Service roads that run behind highway properties are often less disruptive to existing businesses than frontage roads, less costly for an agency, and more functional than a frontage road.**
- Rear service roads can provide access to businesses on each side and can operate safely from both directions. Frontage roads provide access only to businesses fronting on the highway and are much safer when designed for one-way traffic.
- Additional right-of-way will be needed for the frontage or service road and for connecting a service road back to the highway or side street. If your site will be impacted, it is important to work with the agency on how to reduce adverse effects. For example, if your site becomes nonconforming under local zoning regulations because of a smaller setback or other change, ask the local agency if they will waive that status, given that it was caused by a government right-of-way taking.

## What are other commonly used access management techniques?

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|--|--|---|
| Regulate minimum spacing of median openings and access connections (driveways and street connections).         | Limit the number of access points per property, or consolidating access points and encouraging shared driveways. | Establish standards for driveway width, driveway throat length and internal drive aisles to move traffic smoothly off of the adjacent street. |
| Move access points away from signalized intersections and freeway ramps.                                       | Incorporate right- and left-turn lanes into roadways.  | Close or replace a full median opening with a directional opening.  |
| Provide a service road or parallel collector roads and side streets for site access along an arterial roadway. | Promote interconnection of parking lots and unified on-site circulation systems.                                 | Install a median on an undivided roadway or replace a continuous two-way left-turn lane with a median.  |

## So what's the bottom line on access management?

Efforts by government agencies to manage access in site development and road projects can help businesses, even those operating on older highway corridors, in a variety of ways. Here are some specific benefits to you and your customers:

- **Fewer roadway delays and better traffic flow will result, which will preserve and possibly even enhance the market reach of businesses in your corridor;**
- Safer approaches to businesses result from installation of medians, which can also be landscaped to improve the image of the area;
- Properly designed entrances shared by multiple businesses allow more site area for parking, more customer options to access your site, and improved landscaping or other site amenities;
- Service roads along the highway allow customers to enter and exit businesses conveniently and safely, away from faster moving through-traffic;
- Internal connections between businesses allow customers to circulate easily, without reentering a busy road; and/or
- Driveways and service road entrances farther away from signalized intersections allow easy access for customers, even during times of peak congestion.

*"It has been a very positive thing all the way around, from the economic, and the community sides. We have improved our tax base, we have improved our traffic problem, and plus we have improved our business community."*

— **Chuck Fisher, Supt. Public Works**  
**Ankeny, Iowa**

**In brief, minimizing the number of curb cuts, consolidating driveways, constructing landscaped medians, and coordinating internal site circulation and parking among several businesses results in a visually pleasing and more functional corridor. That protects your investment in your business, the public investment in the roadway, and can even help attract new investment into the area.**



*"There are a lot of beautification projects going on, tree plantings and what have you. I think the landscaping in the medians has very much added to the very nice decorum of Ankeny. It will make a nice impression for those visiting Ankeny, or living here."*

— **Andy Kasper, Iowa Realty, Ankeny, Iowa**

## What can be done to keep my business going during construction?

There's no doubt about it, road construction can disrupt customers and drivers, but there are ways adverse impacts can be minimized. **Two key issues during construction are maintaining open access to businesses for customers and deliveries, and having sufficient sign visibility so your customers know you are open, and know how to enter and exit your site during this period.**

When your road is scheduled for reconstruction, your transportation agency will initially notify you about what to expect in terms of traffic, duration of construction, any foreseeable disruptions, and so on. It is important for you to respond to them about your special needs and concerns. Below are some of the things that you can ask of the agency:

- Provide clear signs from the roadway to business entrances;
- Provide temporary and/or secondary business access points, where feasible;
- Schedule construction for after business hours or to occur during times of low usage for seasonally-oriented businesses;
- Provide alternative parking, if possible and avoid taking or blocking parking spaces;
- Stagger construction along a corridor so impacts are localized and staged;
- Expedite construction through incentive/disincentive programs;
- Avoid blocking business entrances with construction equipment or construction barriers;
- Establish a single point of contact in the agency about the construction project to communicate with property and business owners and help address issues that may arise;
- Provide regular project progress reports to business and property owners.

Business owners certainly may see drops in gross revenues during construction. But these are not unlike drops you may routinely experience during expansions, remodeling, seasonal variations, or other self-initiated management. Experience has shown that “construction” drops are temporary too, and that retail sales typically return to pre-construction levels or greater. Research findings from corridors in Texas indicate that businesses did not change employment levels during construction periods. This finding indicates that retailers understand that construction projects are a temporary and perhaps even an inevitable disruption to business, and that loyal patrons will return to stable businesses. The same research found that gross revenues typically either returned to pre-construction levels or were higher after construction was complete (7).

**YES,  
WE ARE  
OPEN**

## How can I have a say in the access management project on my road?

**Get involved!** All government agencies are required to involve the public in transportation policy and project decisions. Most state transportation agencies offer open house meetings during transportation project planning and design, and both state and local government agencies conduct public meetings and hearings when making important policy or regulatory changes that involve access management. Prospective business owners can also review area master plans to research potential changes.

**It is important for you as a stakeholder in an access management project to attend public meetings and hearings and to voice your ideas and concerns.**

These meetings are opportunities for you to hear more about an access management project or plan and to make the planners and engineers aware of how it impacts your business. This might involve issues related to internal traffic circulation and parking, deliveries, plans for expansion, etc. Knowing this information early in project planning or design allows them to make better project decisions and can result in changes that reduce or avoid adverse impacts on your business.

For example, many businesses depend on trucks for deliveries and other functions. Larger trucks are not typically able to make certain movements (such as U-turns). It is important to work with agency staff to develop a plan that will accommodate truck access to your business in a manner as convenient as possible. Sometimes this will require that trucks follow a slightly different route to arrive at the property. Project planners can work with you to assure that trucks will be able to access your business. This is just one of many ways your input is important.

## Where can I go to learn more about access management?

Hopefully this primer has answered some of the questions that you, as a business or property owner, may have. Your state or local transportation agency or your state's Federal Highway Division office (on larger projects) are other excellent resources to point you to the right project manager, or to answer your general questions concerning access changes. These transportation agencies need and value your input as they strive to provide a safe and efficient highway system.

For the latest information on access management or to order the latest Access Management Library CD/DVD collection, go to [www.accessmanagement.gov](http://www.accessmanagement.gov). Other important sources for information on the economic effects of access management include the TRB Access Management Manual, and NCHRP Report 420: Impacts of Access Management Techniques, which are both available from the Transportation Research Board at [www.trb.org](http://www.trb.org).

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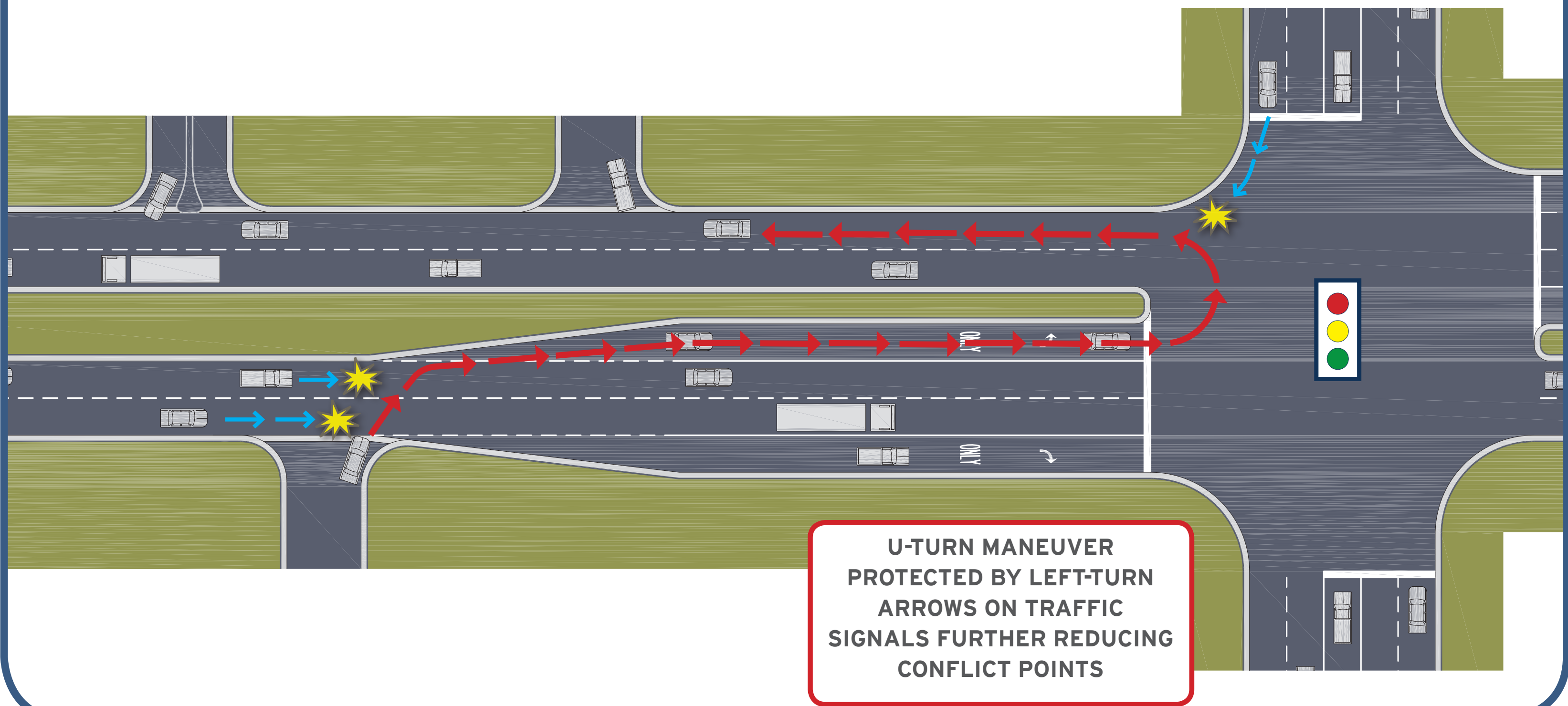
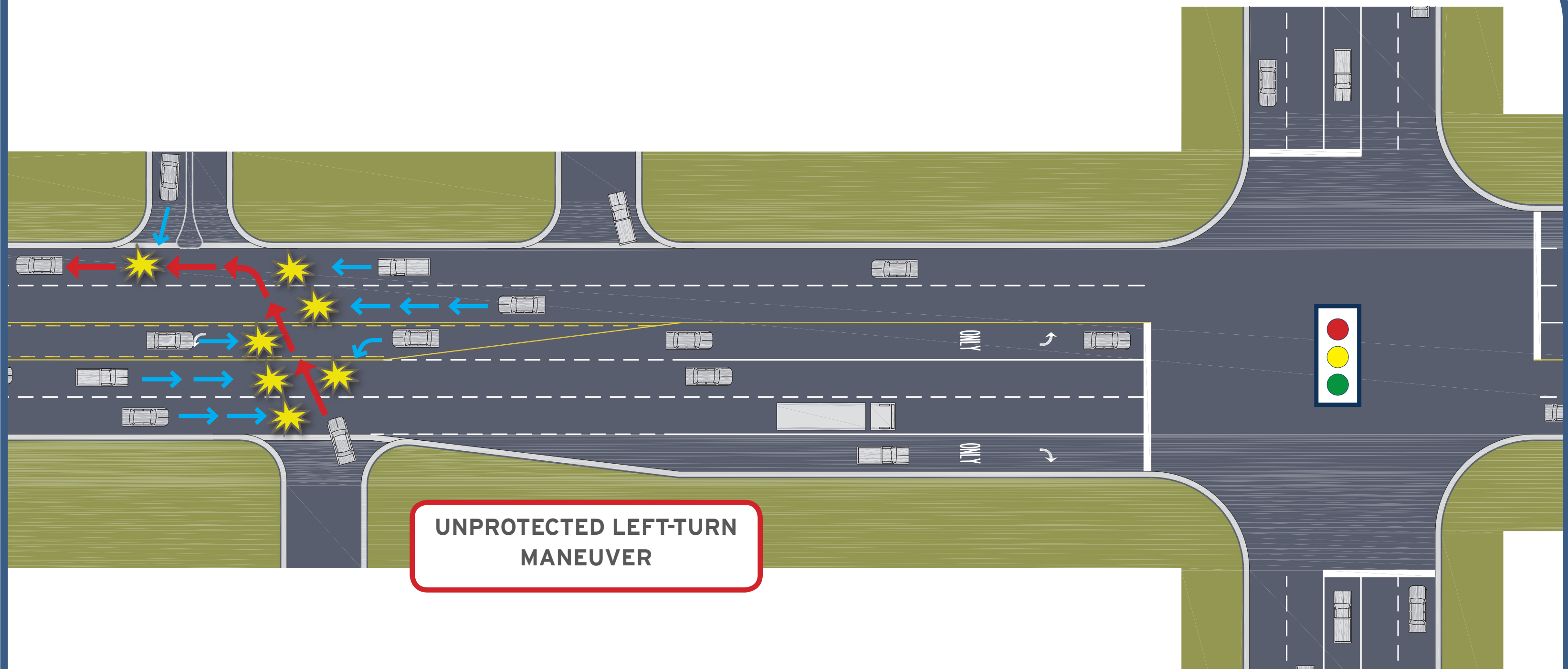
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**SAFETY BENEFITS OF U-TURNS**  
UNPROTECTED VS. PROTECTED LEFT-TURN MANEUVER

**SIGNALIZED INTERSECTION**



**UNSIGNALALIZED DRIVEWAY**

